

IN THE DRAWINGS

Please replace the three sheets of drawings containing Figs. 1-6 with the attached replacement sheets wherein (1) a reference numeral has been provided for the point P1; and (2) the portion of line 14b to the right of point P1 is drawn using double chain lines.

Attachment: Replacement Sheets (3)

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claims 4, 7, 10-20, 22, 25 and 28 have been cancelled. Claim 29 has been amended to recite that the tapered portion which stops the fitting member and which is located adjacent the large diameter portion includes a curved transitional portion contiguous therewith. This clarifies that the curved transitional portion, e.g., 13a, 23a, 33a, 43a, 102a, comprises a part of the portion which stops the fitting member. Claim 29 has further been amended to recite that the further portion which reduces the diameter of the shank is located adjacent the position where the plurality of splines and the plurality of grooves diametrically converge. Basis for this is found in Figs. 2, 3 and 6. New Claim 30 recites that the further portion has a curvature different from that of the curved transitional portion of the tapered portion which stops the fitting member. Basis for this is found in Figs. 4 and 5 and at lines 16-18 of page 10.

Concerning paragraph 3 of the outstanding Office Action, Figs 2-6 have been amended to identify the point of convergence as P1. Additionally, the imaginary portion of line 14b is drawn using double chain lines.

Concerning paragraph 5-6 of the outstanding Office Action, the requirement for a substitute specification is respectfully traversed since the amendment to the specification now correctly identifies the paragraph to be amended as that beginning at line 27 of page 2, and the paragraph referring to "Patent Document 1," to be deleted, as that beginning at line 33 of page 2.

In response to the rejection of Claims 4, 20, 22 and 29 under 35 U.S.C. § 112, first paragraph, Applicants wish to respectfully point out that the claims recite that it is the tapered portion of the shank which stops the fitting member *and is located adjacent the large diameter portion of the shank* which reduces the diameter of the shank to a minimum diameter greater than that of the splined portion at the position where the splines and grooves

diametrically converge. Thus, for example, the tapered portion 12, 13a of the shank of Fig. 2 which is located adjacent the large diameter portion 11 has a minimum diameter which is greater than that of the point of convergence P1. In contrast, it is the “further portion” which reduces the diameter of the shank to that of the point P1.

The Examiner has also objected to the claims under 35 U.S.C. § 112, second paragraph (paragraph 8) because the minimum diameter of the tapered portion 12 is greater than d_0 . However, the curved transitional portion 33a (e.g., Fig. 4) adjacent the large diameter portion of the shank has a minimum diameter of d_0 .

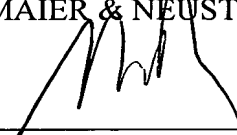
Concerning the rejection of Claim 29 under 35 U.S.C. § 102 (paragraph 9), the amended claims are believed to clearly define over the admitted prior art. According to the admitted prior art of Figs. 10-11, high tensile stresses arise in the area between points P1 and P2. The invention recited in Claim 29 therefore provides the claimed “further portion” which reduces the diameter of the shank to that of the splined portion at the position where the plurality of splines and the plurality of grooves diametrically converge. Moreover, in order to more clearly define the invention, Claim 29 now recites that the tapered portion which stops the fitting member and which is located adjacent the large diameter portion includes a curved transitional portion contiguous therewith, and that the transitional portion reduces the diameter of the shank to a minimum diameter at the transitional portion which is greater than that of the splined portion at the position where the plurality of splines and the plurality of grooves diametrically converge. In contrast, referring to the prior art of Fig. 10(b), the tapered portion 102, including the contiguous curved transitional portion 102b, reduces the diameter of the shank to a minimum diameter at the transitional portion 102b which is *the same as* that of the splined portion at the position P1 where the plurality of splines and the plurality of grooves diametrically converge. Claim 29 therefore clearly defines over the prior art.

New Claim 30 recites that the further portion in the space between the splined portion and the portion which stops the fitting member is separated from the curved transitional portion of the tapered portion which stops the fitting member by at least a change in slope. This is exemplified in Figs. 4-5 in which the diameter of the shank is reduced from that of the minimum diameter of the curved portion 33a, 43a to that of the splined portion by a portion 33b or 43b which has a different slope from that of the curved portion 33a, 43a.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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